IVCHENKO, S., kand. sel'skokhozyaystvennykh nauk

Ukrainian eucalypti. Znan. ta pratsia no.3:21-22 Mr '59.
(MIRA 12:10)

(Eucalyptus)(Ukraine--Poplar)

IVCHENKO, Sergey Ivanovich; kand.sel'skokhoz.nauk; KHINTSKARIYA, Ye.N.,
red.; SMIRNOVA, M.I., tekhn.red.

[The school arboretum] Shkol'nyi dendrarii. Moskva, Gos.uchebno-
pedagog.izd-vo M-va prosv.RSFSR, 1960. 235 p.

(MIRA 13:12)

(School gardens)

IVCHENKO, S., starshiy nauchnyy sotrudnik, kand.sek'skokhoz.nauk

Green protection. Znan. ta pratsia no. 4:8 Ap '61. (MIRA 14:5)

1. TSentral'nyy respublikanskiy botanicheskiy sad AN USSR.
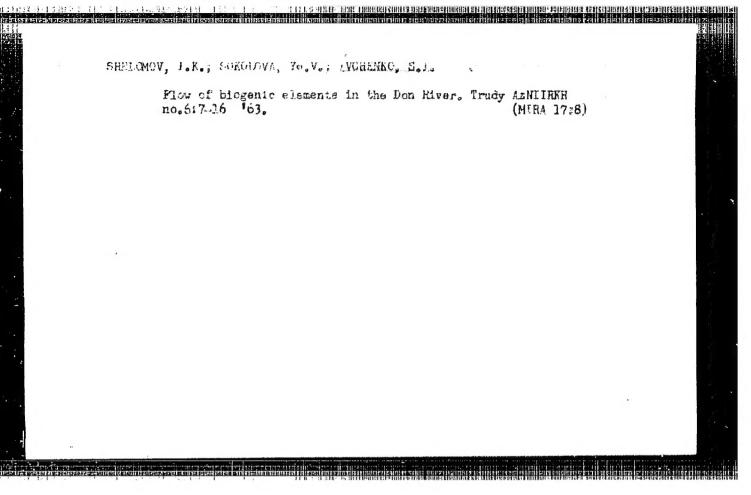(Afforestation)

IVCHENKO, S., starshiy nauchnyy sotrudnik

Garden on the Dnieper River. Znan. ta pratsia no.7:16-17 Jl '62.
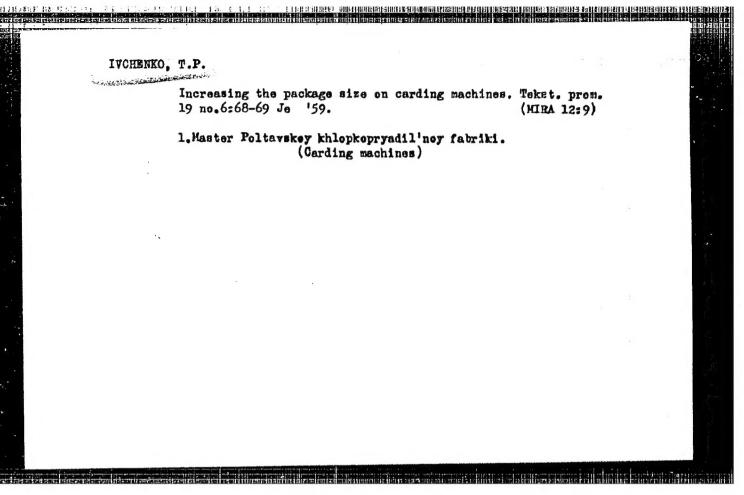
(MIRA 15:7)

1. TSentral'nyy respublikanskiy botanicheskiy sad AN UkrSSR.
   (Kiev--Botanical gardens)

SHELOMOV, I.K.; SOKOLOVA, Ye.V.; IVCHENKO, S.I.

Flow of biogenic elements in the Don River. Trudy AzNIIRKH
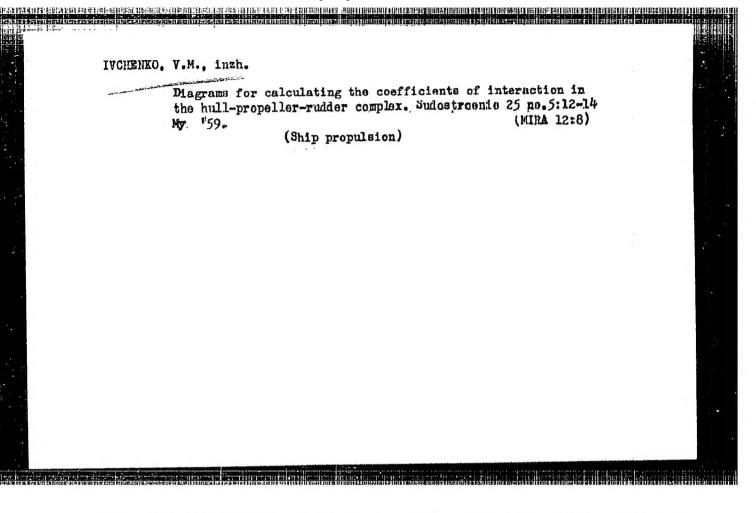no.6:7-16 '63.                                         (MIRA 17:8)

IVCHENKO, Sergey Ivanovich; ANTONYUK, L., red.
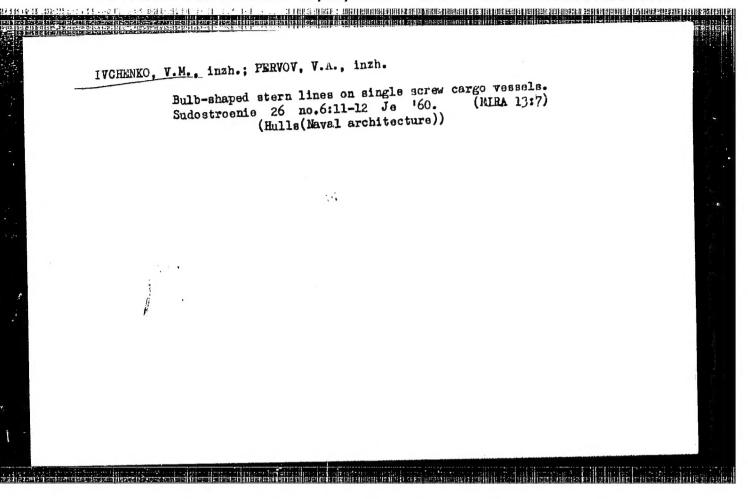
[Riddles of cinchona; stories about trees] Zagadki
tsinkhony; rasskazy o derev'iakh. Moskva, Molodaia gvardiia,
1965.  206 p.                        (MIRA 18:5)

IVCHENKO, T.P.

Increasing the package size on carding machines. Tekst. prom.
19 no.6:68-69 Je '59.                          (MIRA 12:9)

1.Master Poltavskoy khlopkopryadil'noy fabriki.
              (Carding machines)

IVCHENKO, V.M., inzh.

Diagrams for calculating the coefficients of interaction in the hull-propeller-rudder complex. Sudostroenie 25 no.5:12-14 My '59.                                              (MIRA 12:8)

(Ship propulsion)

IVCHENKO, V.M., inzh.; PERVOV, V.A., inzh.

Bulb-shaped stern lines on single screw cargo vessels.
Sudostroenie  26  no.6:11-12  Je  '60.          (MIRA 13:7)
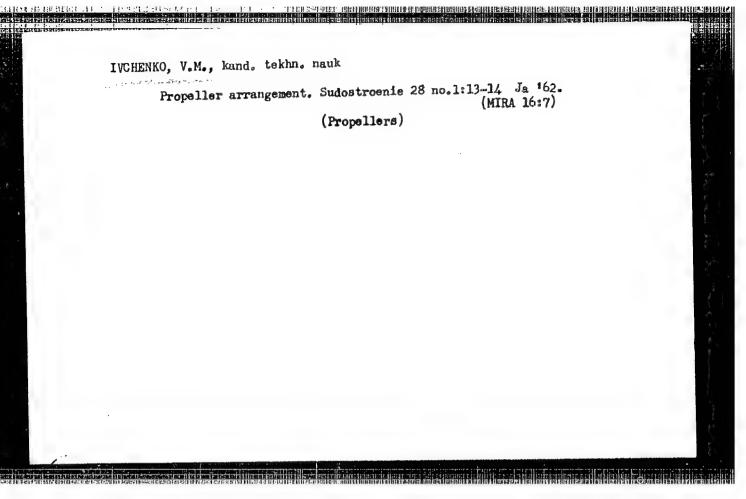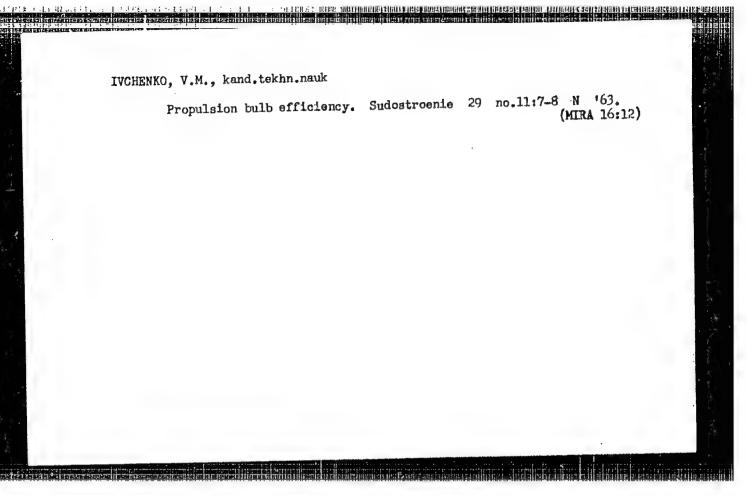                    (Hulls(Naval architecture))
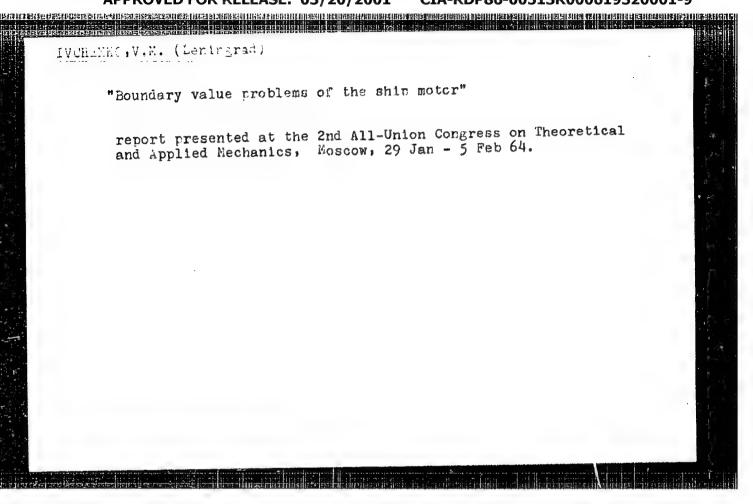
SLESAREV, A.; IVCHENKO, V. M.

Organization of integrated departments for ship repairs between voyages. Mor. flot 22 no.9:36-37 S '62. (MIRA 15:12)

1. Glavnyy inzh. sudoremontnogo zavod "Pregel'" (for Slesarev).

(Ships—Maintenance and repair)

IVCHENKO, V.M., kand. tekhn. nauk

      Propeller arrangement. Sudostroenie 28 no.1:13-14  Ja '62.
                                         (MIRA 16:7)
               (Propellers)

IVCHENKO, V.M., kand.tekhn.nauk

Propulsion bulb efficiency. Sudostroenie 29 no.11:7-8 N '63.
(MIRA 16:12)

IVCHANKO,V.M. (Leningrad)

"Boundary value problems of the ship motor"

report presented at the 2nd All-Union Congress on Theoretical
and Applied Mechanics,  Moscow, 29 Jan - 5 Feb 64.

agustic of propellors in transport vessels. Sudostroenie no.7:8-10
                                                                    (MIRA 18:8)
2 !=5.

L 13371-66    (N)    EWT(m)/ETC(F)/EPF(n)-2/EWG(m)/EWP(b)    IJP(c)
ACC NR: AP6002342                         SOURCE CODE:   UR/0198/65/001/012/0107/0112

62
B

AUTHOR:  Ivchenko, V. M. (Kiev)

ORG:  Institute of Hydromechanics, AN UkrSSR (Institut gidromekhaniki, AN UkrSSR)

TITLE:  Blade theory in regimes of supercavitations

SOURCE:  Prikladnaya mekhanika, v. 1, no. 12, 1965, 107-112

TOPIC TAGS:  cavitation, hydrodynamics, propellor blade, incompressible flow, acceleration potential, integral equation

ABSTRACT:  On the basis of Prandtl's acceleration potential, a boundary value problem is formulated for design and check analysis of marine engines operating in  sub- and supercavitation regimes.  The droplet-liquid flow is assumed to be ideal and incompressible, and the blades are assumed thin, such that a linear theory will be applicable.  The unsteady hydrodynamic equations are combined with the impenetrability condition for the blades to yield

$$W_n = \frac{\partial f_l}{\partial t} + V_e \frac{\partial f_l}{\partial s} + W_{en} = \left(\frac{\partial}{\partial t} + V_e \frac{\partial}{\partial s}\right) f_l + W_{en} = \left(\frac{\partial}{\partial t} + V_e \frac{\partial}{\partial s}\right)\left(c J_d \pm \frac{c}{2}\Delta J_l\right) + V_e \delta\alpha_e,$$

$$W_{en} = \vec{n}; \quad W_e = V_e \delta\alpha_e(t, r, s, n)$$

where the equation for the blade surface is given by   $F_l = n_l - f_l(t, r, s) = 0.$

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L 13371-66
ACC NR: AP6002342

For the noncavitating case, two problems are studied: determine the blade geometry for a given pressure distribution, or, determine the hydrodynamic characteristics for a given blade geometry. The first analysis leads to the integral equation

$$-\varrho V_i^2 \frac{\partial^2 f}{\partial s^2} = \frac{1}{4\pi} \sum_{k=0}^{z-1} \left\{ v.\, p. \iint_{S_k} [p] \frac{\partial^2 L}{\partial n' \partial n} \cdot dS_k - \iint_{S_k} \left[ \frac{\partial p}{\partial n'} \right] \frac{\partial L}{\partial n} dS_k \right\}$$

The corresponding expression for the supercavitating flow is given by

$$\frac{1}{4\pi} \sum_{k=0}^{z-1} \iint_{S_k} \left[ \frac{\partial p}{\partial n'} \right] L dS_k = (p_d - p_0) - \frac{|p|_l}{2} + \frac{1}{4\pi} \sum_{k=0}^{z-1} \iint_{S_k} |p| \frac{\partial L}{\partial n'} dS_k$$

$$l, k = 0, 1, 2 \ldots z - 1.$$

Similar expressions are obtained for describing the hydrodynamic characteristics of the blade flow. Orig. art. has: 15 equations and 1 figure.

SUB CODE: 21, 13   SUBM DATE: 11Jan65/   ORIG REF: 006/   OTH REF: 003

Card 2/2

L 36468-66   EWP(m)/EWT(1)   WW/GD

ACC NR: AT6016717   (N)        SOURCE CODE:   UR/0000/65/000/000/0041/0044

AUTHOR:  Ivchenko, V. M.                              50

ORG:  Institute of Hydromechanics AN UkrSSR (Institut gidromekhaniki $B+1$ AN UkrSSR)

TITLE:   The Zhukovskiy and Lagally formulas

SOURCE:  AN UkrSSR.  Gidrodinamika bol'shikh skorostey (High speed hydrodynamics), no. 1. Kiev, Izd-vo Naukova dumka, 1965, 41-44

TOPIC TAGS:  fluid flow, Euler equation, hydrodynamic theory

ABSTRACT:  The article demonstrates that the Zhukovskiy and Lagally theorems for the arbitrary motion of a fluid can be obtained from the momentum equation for a continuous medium.  It is assumed that the fluid contains features of the first and second types (sources and eddies).  Then, with the Euler approach to the description of the field of a continuous medium, application of the momentum law to an elementary particle of the fluid gives

$$\frac{D_s(\rho \vec{W} \delta \tau)}{dt} = (\text{Div}\, \overline{T} + \overline{F} - q)\delta \tau, \qquad (1)$$

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L 36468-66

ACC NR: AT6016717

where $\rho$ is the mass density of the fluid; $\vec{W}$ is the absolute velocity of the motion of the fluid; $\delta\tau$ is the elementary volume of a particle of the fluid; T is the stress tensor; $\vec{F}$ is the mass force; $\vec{q}$ is the reactions of the fluid, immovable in an absolute system of coordinates; $D_a/dt$ is the derivative with respect to time. On the above premises, the author proceeds to a derivation of the Zhukovskiy and Lagally formulas. Orig. art. has: 16 formulas.

SUB CODE: 20, 12/ SUBM DATE: 30Sep65/ ORIG REF: 002/ OTH REF: 001

Card 2/2

IVCHENKO, V.V.; SLESAREV, A.P.; MITINA, I.I., red.

[Work organization in enterprises for ship maintenance
between voyages] Organizatsiia raboty predpriiatii mezh-
reisovogo remonta flota. Moskva, Rybnoe khoziaistvo,
1963. 53 p.                                    (MIRA 17:6)

IVCHENKO, Vladislav Vasil'yevich; STUDENETSKIY, S.A., glav.
        red.; VLASENKO, V.G., red.

        [Mathematical optimization principles in planning in the
        fishing industry] Matematicheskie osnovy optimizatsii pla-
        nirovaniia v rybnoi promyshlennosti. Kaliningrad, Izd-vo
        gazety "Kaliningradskaia pravda"] 1964. 57 p.
                                            (MIRA 18:6)

L 2552-66   EWT(d)/EED-2/EWP(1)   IJP(c)   BB/GG

ACCESSION NR: AF5021338

UR/0120/65/000/004/0094/0100
539.1.075

AUTHORS: Yekatov, A. B.; Ivchenko, V. Ye.; Katalin, L. A.; Meshkov, N. V.;
Smirnov, V. I.; Chernukhin, V. L.

TITLE: Multidimensional analyzer with preliminary data processing and combined
memory

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 94-100

TOPIC TAGS: computer, computer control, computer input device, computer memory,
computer storage device, memory core, reactor, nuclear energy, neutron radiation,
radiation measurement

ABSTRACT: The functional characteristics of a multidimensional analyzer are de-
scribed. The analyzer was created for studying energy and angular distribution
of slow neutrons; however, it may also be used for other multidimensional measure-
ments with corresponding input devices. The storage unit of the device consists
of a memory having ferrite cores and a magnetic tape 6.25 mm wide with four recording
channels. The combination of integral and nonintegral memory units allows a flex-
ible memory system both in terms of size and in terms of on-line control during

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ACCESSION NR: AP5021338

2

the conduct of an experiment. Preliminary automatic data processing includes
the functions of collection, sorting, certain calculations, and translation
for computer input or from printer and oscillograph output. Basic units of the
hardware are:  a) the input unit, b) core memory, c) magnetic tape memory, and
d) the output and data processing unit. All units are built from semiconductor
and magnetic elements. The basic core memory has a capacity of 2048 16-bit words
and is provided with a speed monitor feature to give a slower recording rate at
input loading. Block diagrams are included, showing the flow of information
through the composite system during data collection, sorting, transformation, and
continuous process control. Particular information on cycle times and recording
speeds is given. For neutron tracking experiments, data  pass  through  de-
tection,  signal amplification, phasing, and time conversion into machine
code. The passage of information from each detector is parallel and independent.
Specific information on measurement time interval limitations is given. Func-
tional block diagrams of the input unit, high speed intermediate memory, and mag-
netic tape recording unit are shown and discussed. Data may be processed prior
to output for obtaining the double differential section of neutrons. The formulae
used in the calculations are given. The authors thank A. V. Andriashin, B. Ya.

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L 2552-66
ACCESSION NR: AP5021338

Gerasimov, and N. Ye. Detinenko for assisting in the planning and design of the
analyzer, and S. I. Chubarov for his interest and assistance. Orig. art. has:
3 figures and 2 formulas.

[04]

ASSOCIATION: Fiziko-energeticheskiy institut GKAE, Obninsk (Physics and Power
Engineering Institute, GKAE)

SUBMITTED: 11Jan65          ENCL: 00                    SUB CODE: DP, NP

NO REF SOV: 005             OTHER: 000                  ATD PRESS: 4109

Card 3/3

IVCHENKO, Ya.G.; KANTOR, I.I.; KOSAREVA, L.A.; SEVAST'YANOVA, G.V.;
        EYGENSON, A.S.

Grading crude oils of Bashkiria and Tataria. Trudy BashNII
NP no.1:5-19 '59.                            (MIRA 12:6)
                (Petroleum--Analysis)

SOV/65-59-4-2/14

AUTHORS:     Eygenson, A.S., Ivchenko, Ye.G. and Kantor, I.I.

TITLE:       Selection of Processing Methods of High Sulphur-Content
             Petroleums from the Bashkirskaya ASSR    (K vyboru skhem
             pererabotki vysokosernistykh neftey Bashkirskoy ASSR)

PERIODICAL:  Khimiya i tekhnologiya topliv i masel, 1959, Nr 4,
             pp 7-12 (USSR)

ABSTRACT:    The extraction of petroleums with a high sulphur content
             is to be increased during 1959 to 1965 and will, in 1965,
             be 6 to 7 times greater than in 1958.  It is foreseen
             that the content of diesel fuels in the petroleum
             (containing up to 1% sulphur) will fall from 19% in
             1958 to 8% in 1965.  The sulphur content of the fractions
             boiling at different temperatures, and of goudron, is
             given and also listed in Table 1.  Thus, the sulphur
             content in gasoline and kerosene-gas-oil fractions
             exceeds the permissible limits as specified by GOST.
             The vacuum gas-oil can either be subjected to cracking
             and subsequent hydro-desulphurisation of the gasoline and
             light gas-oil, or preliminary hydro-desulphurisation of
Card 1/4     the crude can be carried out which makes it possible to

SOV/65-59-4-2/14

Selection of Processing Methods of High Sulphur-Content Petroleums
from the Bashkirsk

obtain low sulphur-content products.  Relevant
experiments were carried out by VNII NP and results
published by A.V.Agafonov et al in the article
"Catalytic Cracking of Crudes and Hydro-Purified
Vacuum Gas-Oil obtained from Arlansk Petroleum"
(pp 25-31 of this same issue).  Hydro-purification
reduced considerably the sulphur- and nitrogen-content
as well as the viscosity and specific weight of the
gas-oil.  Results obtained during catalytic cracking
processes indicate that the yield of light fractions
during the processing of the hydro-purified crudes
increases by 7 to 8%;  the amount of coke formation
decreases to a considerable extent.  The quality of the
desulphurised crudes is considerably improved.  The
heavy gas-oil contains about 0.4% sulphur and can be
used as a component for low sulphur content fuels.  Very
satisfactory results were obtained during the coking of
high sulphur-content goudron;  these experiments were
Card 2/4     carried out by A.F.Krasyukov and make it possible to

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Selection of Processing Methods of High Sulphur-Content Petroleums
from the Bashkirsk

obtain high yields of light fractions.  The gasoline and
gas-oil distillates contain 1.13% and 2.7% sulphur
respectively.  The hydro-desulphurised gasoline contains
up to 0.015% sulphur, has an octane number of 44 and an
iodine number of less than 1;  it can be used alone or
in mixtures with fractions obtained during direct
distillation as raw materials for catalytic reforming
processes.  The hydro-purified light gas-oil fraction
(between 200 and 350°C) contains up to 0.2% sulphur, has
an iodine number of 4 to 6 and its cetane number is 42
to 44.  The heavy gas-oil can be used as solvent for
goudron and as a fuel component.  Comparative costs of
gasolines obtained by these processes and by fractional
distillation are given in Table 2.  High-quality
petroleum products can be obtained by processing
petroleums with a high content of sulphur and tars.
Three different methods of processing high sulphur-content
petroleums were investigated:  1) low degree of conversion
(35% yield of light fractions);  2) medium degree of

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SOV/65-59-4-2/14

Selection of Processing Methods of High Sulphur-Content Petroleums from the Bashkirsk

conversion (57% yield of light fractions)  and
3) high degree of conversion (66% of light fractions).
By using the last method fractions boiling at 85,
85 to 120,  120 to 180,  180 to 240,  240 to 350 and
350 to 450°C have been obtained.  The gasoline fractions
boiling at 85 to 120°C and 120 to 180°C are catalytically
reformed. The 180 to 240°C fraction is subjected to hydro-
purification, and the purified component of kerosine
mixed with the unpurified 120 to 180°C fraction, for
obtaining industrial kerosine.  Comparative data of these
three basic methods are given in Table 3.  In each case
the octane number of the gasoline was $>72$ and the sulphur
content of the diesel fuel 1%.  The most satisfactory
results for high quality motor fuels and raw materials
for the petrochemical industry are obtained when using
method Nr 3.  There are 2 figures and 3 tables.

Card 4/4

IVCHENKO,

SOV/65-59-4-4/14

AUTHORS:    Agafonov, A.V.,  Abayeva, B.T.,  Androsova, A.S.,
            Nyemann, A.S.;  Kantor, L.I.,  and Ivchenko, Yu.G.

TITLE:      Catalytic Cracking of Crude and Hydro-Purified Vacuum
            Gas-Oil from Arlan Petroleum (Kataliticheskiy kreking
            iskhodnogo i gidroochishchennogo vakuumnogo gazoylya
            arlanskoy nefti)

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 4,
            pp 18-24 (USSR)

ABSTRACT:   Vacuum gas-oil from Arlan petroleum contains 3.2%
            sulphur compounds, 0.11% nitrogen compounds and 24%
            tarry substances; these quantities are larger than
            the corresponding quantities in heavy gas-oil from
            Tuimaz and Bashkirian petroleum. These components
            block the active surface of the catalyst during
            cracking, prevent the access of hydro-carbon molecules
            and therefore decrease the degree of conversion of the
            crude material. Considerable amounts of coke are
            deposited on the catalyst which inhibits secondary
            reactions and leads to decreased yields and inferior
            quality end-products. Hydro-purification was carried
            out as a continuous apparatus in the VNII NP by

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M.A.Chepuror and R.N.Robinson     a stationary aluminium-
cobalt-molybdenum catalyst was used at 350°C, a pressure
of 30 atm and space velocity of the supplied crude
material of 0.7 hour⁻¹. The properties of the starting
material and of the hydro-purified vacuum gas-oil are
tabulated (table 1). The cetane number of the end
product was appreciably higher than that of the raw
material, and contained considerably less vapour (0.013 as
against 0.17%). The properties of the gas-oil fractions
are listed in table 2. Cracking experiments of both
the crude and hydro-purified vacuum gas-oil were carried
out on a pilot plant with a synthetic bead catalyst at
temperatures within the limits of 450 to 520°C,
atmospheric pressure and a space velocity of 0.65 to 1.5,
calculated as the volume of the catalyst per hour. The
ratio of the catalyst to the crude material was contained
in all experiments and equalled 3:1 (table 3). Optimum

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yields of petrol were obtained at temperatures between
450 and 475°C when the optimum space velocity of the
crude material was within the limits of 1.0 to
0.65 hour⁻¹. The hydro-purified vacuum gas-oil
could more easily be processed    an optimum yield of
light components of the same space velocities was
obtained at 70 C.    The authors concluded that in the
presence of a considerable quantity of light fractions
boiling up to 350°C (27.6 at against 19.4%) influences
the yield of the light component. 67% by weight at
at this temperature reached 66 to the optimum yield
against 38 to 37%. Results of the cracking of the crude
indicate (Fig 1) that the hydro-purification of the crude
(by separating the tarry substances, metals, sulphur and
nitrogen) improves the process conditions and also the
properties of the cracking products (compare
table 4). The gasoline obtained by this process is less
saturated, contains more aromatic compounds and has
higher octane numbers (60 to 81.5 as compared to

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SOV/65-59-4-4/14

Catalytic Cracking of Crude and Hydro-Purified Vacuum Gas-Oil from Arlan Petroleum

77.7 to 80.7) (Fig 2). A lower content of unsaturated compounds renders the gasoline more stable. Its induction period exceeds 600 minutes. The light catalytic gas-oils, obtained during the cracking of hydro-purified crude, show improved properties. Their octane number is 34 to 38 (as against 30 to 35) and they contain 0.21 to 0.58% sulphur (as against 2.5 to 3.5%) (Fig 3). These light gas-oils can be used directly as components of diesel fuels. The heavy catalytic gas-oils (fractions boiling above 350°C) can be used for the production of lubricating oils or reused as a recycle. In both cases 2 to 3% of the tarry (tail) fractions have to be separated. The gaseous hydrocarbons produced by this process are of interest as starting materials for petrochemical syntheses. The influence of the temperature on the ratio of unsaturated and saturated hydrocarbons in gaseous reaction products, and on the

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content of unsaturated hydrocarbons in the gas, is shown in a graph (Fig 4). There are 4 figures, 4 tables and 5 English references.

Card 5/5

EYGENSON, A.S.; IVCHENKO, Ye.G.; KANTOR, I.L.; KOSAREVA, L.A.; SEVAST'YANOVA, G.V.

New refining methods for high sulfur-bearing crudes of Bashkiria.
Trudy Bash NII NP no.3:3-18 '60.                    (MIRA 14:4)
(Bashkiria—Petroleum—Refining)

34886

S/081/62/000/003/06.../090

B149/B101

.11.0100 (5419, 3019)

AUTHORS: Eygenson, A. S., Ivchenko, Ye. G., Kontor, I. L., Devyatly-n-
ova, G. V.

TITLE: Petroleum of new deposits in the Bashkirskaya ASSR

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 452, abstract
3L131 (Sb. "Khimiya seraorgan. soyedineniy, soderzhashchikhsya
v neftyakh i nefteproduktakh. v. 4" M., Gostoptekhizdat, 1961,
100-102)

TEXT: The result of analyses of petroleum of high sulfur content from
different deposits of the Bashkirskaya ASSR shows that this petroleum can
be divided into three groups according to the distribution of S among the
fractions: (a) Petroleum with a small content of S in the gasoline frac-
tions ($\leqslant 1\%$) and a gradually and uniformly increasing content in the kero-
ene fractions and in the diesel fuel oils. (b) Petroleum with low content
of S in the gasoline fractions and with an infrequent increase of its con-
tent in the kerosene and diesel oil fractions. (c) Petroleum with consider-
able S content in the gasoline fractions ($\geq 0.5\%$) and with corresponding

Card 1/2

IVCHENKO, Yevgeniy Gordeyevna; SEVAST'YANOVA, Galina Vasil'yevna;
TITSKAYA, B.F., ved. red.; TROFIMOV, A.V., tekhn. red.

[Types of sour petroleums in Bashkiria] Sernistye i vyso-
kosernistye nefti Bashkirskoi ASSR; spravochnaia kniga.
Moskva, Gostoptekhizdat, 1963. 232 p. (MIRA 16:4)
(Bashkiria—Petroleum—Analysis)

IVCHENKO, Ye.G.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.

Oil of the Yusupovo field.  Trudy BashNII NP no.6:63-67 '63.
(MIRA 17:5)

SEVOSTIYANOVA, G.V.; IVCHENKO, Ye.G.

Investigating a kerosene gas oil fraction from Arlan crude.
Trudy BashNII NP no.6:66-75 '63.

Thermal stability of sulfur-bearing crude from Bashkiria.
Ibid.:75-79                                                   (MIRA 17:5)

8/2933/64/006/000/0005/0008

ACCESSION NR: AT4040447

AUTHOR: Ivchenko, Ye. G.; Sevast'yanova, G. V.

TITLE: Petroleum from new fields in Bashkiria

SOURCE: AN SSSR. Bashkirskiy filial. Khimiya seraorganicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh, v. 6, 1964, 5-8

TOPIC TAGS: petroleum, petroleum composition, petroleum physical property, Soviet petroleum, Bashkir petroleum

ABSTRACT: The authors report the results of analyses of petroleum from four new sites in the Bashkir ASSR, carried out in 1960. They found that Saitovskoye petroleu contains 2.73% S, 16.9% tarry silica gels and 7.5% asphaltenes. The density is 0.885 and the viscosity is 23.0 centistokes (at 20C). The light fractions up to 200 and 300C account for 21 and 37.3%, respectively. Nurskoye petroleum contains 3.94% S, 60% tars and 3% paraffins. The density is 0.923 and the viscosity is 145.3 centistokes. The yield of the 200 and 300C fractions is 12.8 and 24%, respectively. Stakhanovskoye petroleum contains 2.45% 2, 60% tars and 3.3%

Card 1/2

IVCHENKO, Ye.G.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.; KUZILOVA, E.T.

Oil of the Sergeyevka field.  Trudy BashNII NP no.7:4-9 '64.
                                        (MIRA 17:9)

ACCESSION NR: AT4043271                     S/2744/64/000/007/0009/0014

AUTHOR: Sevast'yanova, G. V., Ivchenko, Ye. G.

TITLE: Aromatic hydrocarbons in Arlan petroleum fractions obtained at 180-200 and 200-300C

SOURCE: Ufa. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti. Trudy*, no. 7, 1964. Sernisty*ye nefti i produkty* ikh pererabotki (Sour crude oil and products of refining), 9—14

TOPIC TAGS: hydrocarbon, aromatic hydrocarbon, Arlan petroleum, alkylbenzene, tetra-substituted alkylbenzene, trisubstituted alkylbenzene, sulfur, absorption spectrum, aluminum oxide, chromatography, gas-liquid chromatography, petroleum refining

ABSTRACT: Arlan petroleum fractions obtained at 180-200 and 200-300C were investigated by gas-liquid chromatography. Tabulated data show that, in the 180-200C aromatic frac-tion, there was a considerable amount of tetrasubstituted alkylbenzene and a smaller amount of trisubstituted alkylbenzene. After removing the sulfur compounds from the 200-300C fraction, the product (accounting for 80.69% of the aromatic fraction) had the follow-ing characteristics: density 0.8904, refractive index 1.5082, molecular weight 193, sulfur content 0.02%. This fraction was then subjected to chromatography over aluminum oxide

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ACCESSION NR: AT4043271

and the mono and bicyclic aromatic hydrocarbons were separated. The monocyclic hydro-carbons were chromatographed again to yield narrow fractions based on the refractive index, and these narrow fractions were subjected to vacuum fractionation to obtain still narrower fractions. Finally, the structural composition of five-degree fractions was determined by absorption spectra over an ultraviolet light range of $230-290$ m$\mu$ · Spectral analysis of the narrow fractions obtained from a fraction with a refractive index $n_D^{20}$ of $1.51-1.52$ showed that 1, 3-, 1, 3, 5- and tetraalkyl-benzenes also predominate in these fractions. The narrow five-degree fractions obtained from fractions with $n_D^{20} - 1.50-1.51$ and $n_D^{20} = 1.51-1.52$ had a very similar structural composition. Depending on the boiling temperature and molecular weight, the hydrocarbon fractions forming each structural group differ in chain length, degree of branching or ring formation of substituents. Orig. art. has: 3 figures and 4 tables.

ASSOCIATION: Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti, Ufa (Bashkir Scientific Research Institute for Petroleum Refining)

SUBMITTED: 00                                                          ENCL: 00

SUB CODE: OC, FP            NO REF SOV: 003                    OTHER: 002

Card    2/2

SEVAST'YANOVA, G.V.; IVCHENKO, Ye.G.

Aromatic hydrocarbons in fractions ranging from 180-200°C and
200-300°C of Arlan oil.  Trudy BashNII NP no.7:9-14  '64.
(MIRA 17:9)

ACCESSION NR: AT4043272                           S/2744/64/000/007/0015/0019

AUTHOR: Ivchenko, Ye. G., Eygenson, A. B., Sevast'yanova, G. V., Garipova, L. Z.

TITLE: Quality of commercial Romashkin petroleum

SOURCE: Ufa. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti. Trudy*,
no. 7, 1964. Sernisty*ye nefti i produkty* ikh pererabotki (Sour crude oil and products of
refining), 15-19

TOPIC TAGS: petroleum, Romashkin petroleum, sulfur content, octane rating, petroleum
residue, petroleum refining

ABSTRACT: It was found experimentally that the sulfur content of Romashkin petroleum
had increased from 1.6% (in 1956) to 1.8-2.0% (1962) due to a change in the proportion of
crude oils from different sites within the Romashkin area. Since an increase in sulfur
content markedly affects the quality of petroleum products, the 1962 petroleum sample
was further investigated for sulfur content in the various fractions. Results are tabulated
and the distribution of sulfur in narrow fractions is plotted against temperature (see the

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ACCESSION NR: AT4043272

Enclosure).  The total content of fractions obtained at 200 and 300C remained almost un-
changed, as did the octane characteristics of the benzene distillates obtained from the
1962 sample.  Fractions above 270C had a higher sulfur content than in 1956.  The sulfur
content of the benzene fractions was low, while that of the distillates of diesel fuel and
residues was increased.  An increase in the sulfur content of commercial petroleum by
0.26% causes the yield of white products to decrease by 1.5%.  Investigation of the sulfur
content in the petroleum residues showed that fractions taken below 350C had a lower
sulfur content than specified by the standards, but higher by 0.5% than in the analogous
residue from a 1956 sample.  When processed in a cracking plant, this residue gave a
low-standard fuel.  The sorting of petroleum according to the sulfur content is absolutely
essential for planning the adequate technological conditions to obtain high-grade products.
Orig. art. has:  1 figure and 4 tables.

ASSOCIATION:  Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti, Ufa
(Bashkir Scientific Research Institute for Petroleum Refining)

Card 2/4

ACCESSION NR:  AT4043212

SUBMITTED:  00

ENCL:  01

SUB CODE:  FP

NO REF SOV:  003

OTHER:  000

Card 3/4

Fig. 1. Distribution of sulfur in 10-degree fractions of Romashkin petroleum: I = 1962; II = 1956. Abscissa = temperature in °C.

Card 4/4

IVCHENKO, Ye.G.; EYGENSON, A.S.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.

Quality of commercial Romashkino oil.  Trudy BashNII NP
no.7:15-19  '64.                                       (MIRA 17:9)

IVCHENKO, Ye.G.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.

Petroleum from the Karacha-Yelga oil field.  Khim. i tekh. topl.
i masel 10 no.10:16-18  O '65.                      (MIRA 18:10)

1. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke
nefti.

IVCHENKO, Ye.G.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.

Oils of the Novokhazino, Znamenka, and other fields of Bashkiria.
Trudy Bash NIINP no.5:230-238 '62.                    (MIRA 17:10)

ACC NR: AR6017200    SOURCE CODE: UR/0058/65/000/012/A033/A033

AUTHOR: Andriashin, A. V.; Gerasimov, B. Ya.; Yekatov, A. B.; Ivchenko, V. Ye.;
Meshkov, N. V.; Smirnov, V. I.; Chermukhin, V. L.

TITLE: Multidimensional analyzer with preliminary processing of the information and
with combined-type memory

SOURCE: Ref. zh. Fizika, Abs. 12A317

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 2. M.,
Atomizdat, 1965, 147-159

TOPIC TAGS: multichannel analyzer, slow neutron, neutron spectrum, angular distribu-
tion, ferrite core memory, magnetic recording tape, computer component, NEUTRON
ENERGY DISTRIBUTION

ABSTRACT: The authors describe a multidimensional analyzer, intended for the investi-
gation of energy and angular distributions of slow neutrons. The recording unit of
the analyzer consists of a ferrite-core memory and a magnetic-tape of 6.25 mm width
with four-track recording. The combination of integrating and non-integrating memory
devices makes it possible to construct a flexible memory system having large capacity
as well as permitting the exercise of control over the course of the experiment, pre-
liminary adjustments, preliminary processing of information, etc. The analyzer con-
sists of the following fundamental units, constructed entirely of semiconductor and
magnetic elements: a) input unit; b) ferrite-core memory; c) magnetic-tape memory;
d) equalizing unit (intermediate ferrite memory); e) unit for insertion and processing

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~ 34119-66

ACC NR: AR6017200

of data.  Depending on the chosen operating conditions, the functional connection be-
tween the blocks is changed by means of switches.  The analyzer is constructed in the
form of four individual racks with individual power supplies and control panels. L. S.
[Translation of abstract]

SUB CODE:  20, 09

Card  2/2

PUSTOVALOV, L.V., otv. red.; AL'TGAUZEN, M.N., doktor geol.-
min. nauk, red.; VLAS( ". K.A., red.[deceased]; DOLGOPOLOV,
N.N., red.; IVENSEN, Yu.P., doktor geol.-min.nauk, red.;
POZHARITSKIY, K.L., doktor geol.-min. nauk, red.;
SERDYUCHENKO, D.P., doktor geol.-min. nauk, red.;KRASNOVA,
N.E., red.

[Metals in sedimentary formations; heavy nonferrous, minor
and rare metals] Metally v osadochnykh tolshchakh; tiazhelye
tsvetnye metally malye i redkie metally.  Moskva, Nauka,
1965.  389 p.                              (MIRA 19:1)

1. Moscow. Laboratoriya osadochnykh poleznykh iskopayemykh.

SOMINSKIY, Vladimir Samoylovich, dotsent, kand.tekhn.nauk; GUREVICH,
Semen Borisovich, inzh.; KOGAN, Bronislava L'vovna, dotsent,
kand.ekon.nauk; UCHASTKINA, Zoya Vasil'yevna, dotsent, kand.
tekhn.nauk. Prinimal uchastiye: IVCHER, M.I., starshiy pre-
podavatel'. FEDORENKO, N.P., prof., doktor ekon.nauk,
retsenzent; SARMATSKAYA, G.I., red.izd-va; BRAZHISHKO, L.V.,
tekhn.red.; PROKOP'YEVA, L.N., tekhn.red.

[Production organization and planning at pulp and paper mills]
Organizatsiia i planirovanie proizvodstva na tselliulozno-
bumazhnykh predpriiatiiakh. Moskva, Goslesbumizdat, 1958.
257 p.                                                    (MIRA 12:6)
    (Woodpulp industry)    (Paper industry)

IVCHER, M.I.; IOFFE, O.G.

      Calculation of the costs of steam and electric power.  Bum.prom.
33   no.11:26  N  '58.                                    (MIRA 13:8)
          (Paper industry)
          (Steam engineering--Costs)
          (Power engineering--Costs)

IVCHER, M.I., kand.ekonom.nauk

Calculating the production costs of paper and cardboard by
the surface area. Bum.prom. 38 no.9:27-28  S  '63.  (MIRA 16:11)

IVCHER, Mark Isaakovich, kand. ekon. nauk; SINITSYN, M.P., red.

[Problems of calculating and analyzing the costs of woodpulp-paper production] Voprosy kal'kulirovaniia i analiza sebe-stromosti tselliulozno-bumazhnoi produktsii. Moskva, Lesnaia promyshl., 1965. 110 p.                    (MIRA 18:3)

FISHER, M.I.

Analysis of the utilization of industrial equipment in the woodpulp
and paper industry. Trudy LTITsBP no.15:29-35 '65.

Calculating the losses caused by the manufacture of products of
low quality and their analysis. Ibid.:1-60

(MIRA 18:8)

PAMFILOV, A.V.; LOPUSHANSKAYA, A.I.; IVCHER, T.S.

Irreversible polarographic waves of cadmium and lead hexaphos-
phates. Ukr.khim.zhur. 27 no.5:598-603 '61. (MIRA 14:9)

1. Chernovitskiy gosudarstvennyy universitet.
(Lead phosphate) (Cadmium phosphate)
(Polarography)

ZIL'BERMAN, Ye.N.; IVCHER, T.S.; MEYMAN, S.B.; KULIKOVA, A.Ye.;
        PEREPLETCHIKOVA, Ye.M.; TEPLYAKOV, N.M.

Formation of 2-cyclohexen-1-one in the dehydrogenation of
cyclohexanol. Neftekhimia 2  no.1:110-114  Ja-F  '62.  (MIRA 15:5)
        (Cyclohexenone)   (Cyclohexanol)

IVCHER, T.S.; PEREPLETCHIKOVA, Ye.M.; ZIL'BERMAN, Ye.N.

Polarographic determination of 2-cyclohexen-1-one in cyclohexanone and cyclohexanol. Zhur.anal.khim. 17 no.8:1005-1008 N '62.
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(Cyclohexenone)    (Cyclohexanone)    (Cyclohexanol)

IVCHER, T.S.; PEREPLETCHIKOVA, Ye.M.; ZIL'BERMAN, Ye.N.

Polarographic study of some impurities in cyclohexanone. Zhur.-
prikl.khim. 35 no.3:634-637 Mr '62.                    (MIRA 15:4)
                    (Cyclohexanone) (Polarography)

GANINA, V.I.; IVCHER, T.S.; POMERANTSEVA, E.G.; PEREPLETCHIKOVA, Ye.M.;
        ZIL'BERMAN, Ye.N.

Polarographic and spectrophotometric determination of $\alpha$, $\beta$
-unsaturated ketones in cyclohexanone. Zav. lab. 30
no.5:541-542 '64.                                    (MIRA 17:5)

IVCHER, T.S.; ZIL'BERMAN, Ye.N.; PEREPLETCHIKOVA, Ye.M.

Kinetic recombination currents in the polarographic reduction of 2-cyclohex-
1-one. Zhur. fiz. khim. 39 no.3:749-751 Mr '65.               (MIRA 18:7)

IVANOV, K.; DURPATOV, N.

"All-Union Agricultural Exhibition in Moscow." (To Be Contd.). P. 34, (KOOPERATIVNO ZEMEDELIE, Vol. 9, No. 10, 1954, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4 No. 5, May 1955, Uncl.

IVONIV, K.; DUMATOV, N.

"At the All-Union Agricultural Exhibition in Moscow." p. 34,
(KOOPERATIVNO ZEMEDELIE, Vol. 10, No. 1, Jan 1955, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.

IVCHEV, K.

    Konishev, P. Results at the agricultural scientific research institutes during 1955. p. 8.
    KOOPERATIVNO ZEMEDELIE, Sofiya, Vol. 11, no. 4, Apr. 1956.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6  June 1956,
    Uncl.

PAIAKOV, Iv.; ZHELIAZKOVA-PANAIOTOVA, M.; IVCHINOVA, L.

Structural and textural characteristics, and mineral
composition of the chromite ores of Dobromirtai. Godishnik
biol  56 219-251  '61/'62.

BRESKOVSKA, V.; IVCHINOVA, L.

Wavellite of the Madzharovo complex-ore deposit.  Godishnik
biol  56  275-284   '61/'62.

PAIAKOV, Iv.; ZHELIAZKOVA-PAI UTOVA, M.; IVCHINOVA, L.

Structural and textu 1 peculiarities and mineral composition of
chromite ores from the Dobromirtsi deposits. Godishnik biol 56
no.2:219-251  '61-'62 [Publ. '63].

BRESKOVSKA, V.; IVCHINOVA, I.

Wavellite from the Madzharovo complex ore deposits. Godishnik
biol 56 no.2:275-284  '61-'62 [Publ. '63].

IVCSICS, L.

Charcterizing the beginning of alluvium movements with invariant quality group in case of bed load.  p. 425.

HIDROLOGIAL KOZLONY, HYDROLOGICAL JOURNAL.  Budpaest, Hungary, Vol. 39, No. 6, Dec. 1959

Subterranean waters on the territory of the city of Zagreb (Jugoslavia). H
Ivkković   *Arhiv kem i farm.* **3,** 113-7(117 German)(1929).   On the basis of numer-
ous analyses a relationship between the compn. of water and its geographical position
is found and a new theory is set up against the assertion of other authors concerning the
origin of underground water.                                            Jaroslav Klečka

A S R-SL A   METALLURGICAL LITERATURE CLASSIFICATION

**Consistency of chemical composition of Zagreb sub-soil water.** H. Ivanković (Ark. Hemija, 1929, 3, 179—182).—A reply to Janoček's criticism (cf. preceding abstract). R. Truszkowski.

B·III-5

BC

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

**Chemical analysis of the sulfurated thermal water of Varaždinske Toplice.** Hrvoje Ivekovič and Luka Dančevič. *VPS Časopis Vožen, Pismini i Sanit. Tehniku* **2,** 234-5(1936).—A series of analyses of the thermal waters in Varaždinske Toplice shows that Ca is present in the amt. of 16.40%, Na 9.73%, K 5.18%, Mg 3.50%, Sr, Li, Fe, Mn, Al less than 1% each; carbonate 28.39%, sulfate 18.40%, chloride 10.60%, sulfide, borate, nitrate, silicate, NH₃, phosphate less than 1% each. A comparison with an analysis of 1896 is made.           J. G. Tolpin

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

A volumetric method for rapid determination of iodine in mineral water. H. Ivekovič and L. Darvatov. Arhiv Hem. Farm. 10, 51 3[1936]. The sample is treated with $Na_2CO_3$, partly evapd., filtered, acidified with HCl and I pptd. with $KNO_2$; the ppt. is made alk. with $NaHCO_3$ and by treating with $NaAsO_2$, I is now dissolved as NaI. The soln. is then titrated with a 0.02 N I soln. and the difference between the I consumption of this soln. and a blank sample gives the I contents of the water.

J. G. Fodor

PROCESSES AND PROPERTIES INDEX

Determination of organic matter in water and the value of the analytical results. H. Ivekovic. *Plyn. Voda, zdrav. Tech.* 17, 406-12 (1937). *Dept. Sci. Ind. Research, Water Pollution Research, Summary Current Lit.* 11, 127.— Oxidation with $KMnO_4$ is insufficient to det. the org. matter in water as the $KMnO_4$ does not react with all the org. matter. It is also difficult to det. the origin of the org. matter present. Urea is one of the substances which is not broken down by $KMnO_4$. Nitrites cause difficulty in the detn. of the Cl no. by Froboese's method. From the Cl no., the permanganate demand, and the fluorescence in ultraviolet light the nature and amt. of the org. impurities can be detd. A high Cl no. and permanganate demand and strong fluorescence usually indicate recent pollution. When the Cl no. is higher than the permanganate demand, complex N compds. are present. If the permanganate demand is high, the Cl no. low and the fluorescence strong it points to the presence of vegetable matter or humic acids in a relatively fresh condition.

C. L. R

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

Consumption of potassium permanganate and chlorine number as methods of determination of organic substances in water. Hrwoje Ivekovič. *Arhiv Hem. Tehnol.* 12, No. 4-5, 118-24(in German, 124-5)(1938).—Tabulated exptl. results with 34 aq. solns. of org. substances show that neither $KMnO_4$ nor $NaOCl$ is able to accomplish complete oxidation. $KMnO_4$ is more effective except with substances contg. over 15% N with which $NaOCl$ is better.

J. G. Tolpin

Malaline spring at Ponijevo near Zepče, Bosnia. II. Kišić-Ković, L. Dančević, and M. Herrmann (*Ark. Kemiji.* 1940, 14, 21—23).—The $H_2O$ contained Na 0·3073, K 0·0517, Ca 0·3856, Mg 0·4127, Fe 0·0080, $NH_4$ 0·0002, Cl 0·2140, $SO_4''$ 0·1979, $HCO_3'$ 3·8427, $NO_3'$ 0·0006, $H_2SiO_3$ 0·1115, and $CO_2$ 1·0530 g. per l., in Sept., 1939.                                    R. T.

IvEKovič, Hrvoje

1660.

Application of statistical methods in analytical chemistry.

IVEROVIÉ, Hrvoje

IVEKOVIC, H.

The distribution of metals in bauxitic oölites. H. Ivekovié, S. Tezak, and T. Marin (Zagreb Univ., Yugoslavia).—Radovi Jugoslav. Akad. Znanosti i Umjetnosti 296, 101-8 (1953).—Chem. analyses of 7 fractions of oölites obtained from a sample of bauxite from Drniš (Yugoslavia) indicate that linear relationships exist between their $Fe_2O_3$ and $V_2O_3$ or $Cr_2O_3$ contents. For calcg. the approx. $V_2O_3$ and $Cr_2O_3$ contents of a bauxite one can use the formulas: $\% V_2O_3 = \% Fe_2O_3 \times 4.8 \times 10^{-3}$ and $\% Cr_2O_3 = \% Fe_2O_3 \times 5.1 \times 10^{-3}$. There are no relationships with regard to the MnO, TiO, $Al_2O_3$, and $SiO_2$ contents.        N. Plavšić

11/15/54

4

...nary deposits, or they might have been formed in the same deposit but in various layers at different depths. If the resin...

IVEKOVIC, H.

Y U G O .

Distribution of metals in bauxitic colltes H. Iveković
and F. Mixon . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . N. S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . English . . Sec C I 48.
N. Plavšić

IVEKOVIC, M

YUGO

The genesis of baurites. If. Ivekovic. Bull intern.
acad. yougoslave sci. et beaux-arts [Klas. Mat.] 12. (Inst. sci.
math., phys. et tech., Livre 4, 93-7 1954 (in English) - See
CA 49 11259e.
N. Pinding

3

IVEKOVIC, H., H.

IVEKOVIC, H.; ASPERGER, S. "Still on Z. Stalcer's 'critical review'"
Arhiv. Za Kemiju, Zagreb, Vol 26, No 2, July 1954, p. 122

SO:   Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

Determination of the total organic carbon in aqueous solutions. A. Gertner and H. Ivekovic (Univ. Zagreb, Jugoslavia.) Z. anal. Chem. 142, 40-44 (1954).—Oxalic acid, urea, hippuric acid, cystine, dextrose, hexal, acetanilide, and uric acid were detd. in aq. solns. with results varying from 94.1 to 104% of the truth. The sample is acidified with $H_2SO_4$ and treated with ... of ... solns. of ... ml. of 0.N $H_2SO_4$ + 100 ml. of ... $K_2Cr_2O_7$ and the resulting $CO_2$ obtained by heating is passed through an upright condenser and into weighed Ascarite tubes. A second treatment is necessary. Precautions are taken to prevent absorption of $CO_2$ from the air. W. T. Hall

IVEKOVIC, H.

The conductometric determination of carbon in iron and steel. H. Iveković and V. Pulak. Monatsh. 85, 485-90 (1955). The method consists of burning the sample in O and measuring the cond. change of a $Ba(OH)_2$ soln., which serves as an absorbent for the $CO_2$.    H. Neubert

IVEKOVIC, H.

YUGOSLAVIA/Physical Chemistry - Solutions.
          Theory of Acids and Bases                          B-11

Abs Jour  :  Referat Zhur - Khimiya, No 2, 1957, 3923

Author    :  Ivekovic H., Vrbaski T., Pavlovic D.
Title     :  On the Changes of Viscosity Preceding the Precipitation
             of Aluminum Hydrate from Aluminate Solutions.

Orig Pub  :  Croat. chem. acta, 1956, 28, No 1, 41-51

Abstract  :  Study of the changes with time in the viscosity $\eta$ and
             density d of aluminate solutions, at $1^{\circ}$ (content of
             $Al_2O_3$ 0.916-1.029 M, $Na_2O$ 1.427-1.567 M). During the
             process of aging of aluminate solutions $\eta$ and d increa-
             se at first, reaching a maximum 12-14 hours after prepa-
             ration of the solution, after which their sharp decrease
             begins and a precipitation of aluminum hydroxide occurs.
             In solutions containing methanol, the variations of $\eta$
             and D are less pronounced. Periodical changes in proper-
             ties are due to the fact that formation of higher

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IVEKOVIĆ, H.

Precipitations of alumina hydrate from aluminate solutions in the presence of some higher alcohols and starch.  In English.

p. 101 (Croatica Chemica Acta.  Vol. 28, no. 2, 1956.  Zagreb, Yugoslavia)

Monthly Index of East European Accessions (EEAI) IC. Vol. 7, no. 2, February 1958

*IVEKOVIC, H.*

YUGOSLAVIA/Physical Chemistry - Thermodynamics. Thermochemistry, Equilibria,
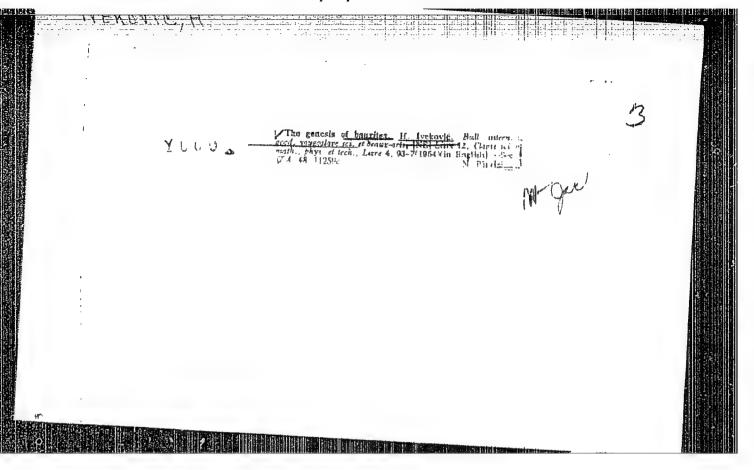    Physical-Chemical Analysis, Phase Transitions.                    B-8

Abs Jour: Referat. zhurnal Khimiya, No 2, 1958, 3785.

Author : H. Ivekovic, I. Bacic.
Inst   : ‾‾‾‾‾‾‾
Title  : On Some Regularities in Caustic Aluminate - Ethanol System.
         I. New Phase Formation.

Orig Pub: Croat. chem. acta, 1956, 28, No 3, 181-190.

Abstract: The component concentration ratios were studied at caustic
          aluminate (I) titration with ethanol (II) at $30^{\circ}$ up to the appear-
          ance of the first instable turbidity, temporary saturation, cor-
          responding to the formation of a new phase. The latter depends
          on $Al_2O_3$ concentration to a greater degree than on $Na_2O$; the amount
          of II for a given I is proportional to the amount of water. Equa-
          tions determining the distribution of water among the component
          parts of I at the turbidity moment are derived. The solubility of

Card   : 1/2                        -25-

YUGOSLAVIA/Physical Chemistry - Thermodynamics. Thermochemistry, Equilibria,
    Physical-Chemical Analysis, Phase Transitions.
                                                     B-8

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3785.

the new phase decreases gradually with the rise of the II con-
centration and with time, and aluminum hydroxide is precipita-
ting. This is explained by structural changes, during which
hydro-complexes convert into tetrahydrooxometa-aluminate with
separation of $OH^-$, and later into polyaluminate $Al_m(OH)_{3m}$.
The concentration of various ions depends on the Al O  and Na O
concentrations and on the alkalinity modulus ($Na_2O/Al_2O_3$). The
equilibrium shifts to the hydrocomplex side at a high alkalinity
modulus and to the polyaluminate side at a low one.

Card   : 2/2

                        -26-

_Ivekovic M._

YUGOSLAVIA/Analytical Chemistry - Analysis of Inorganic
                 Substances.                                          E.

Abs Jour    :  Ref Zhur - Khimiya, No 9, 1958, 28421

Author      :  Ivekovic, H. and Basic, I.
Inst        :  -
Title       :  Concerning Some Relationships in the System Aluminate
               Liquor-Ethanol.  II.  An Approximate Determination of
               Aluminum in Aluminate Liquors.

Orig Pub    :  Croat Chem Acta, 28, No 3, 191-193 (1956) (in German with
               a Serbo-Croat summary)

Abstract    :  A method is described for the rapid approximate determi-
               nation of Al in pure aluminate liquors (I).  The method
               is based on the titrimetric determination of the amount
               of $C_2H_5OH$ required to produce the first signs of turbidi-
               ty in I lasting for 1 min.  Equations for the calculation
               of the concentration of $Al_2O_3$ are presented on the basis
               of the previously discussed mechanism of the reaction

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Distr: 4E2c                                    17

The spontaneous precipitation of hydrated alumina from aluminate solutions. T. Vrbaški, H. Iveković, and D. Pavlović (Univ. Zagreb, Yugoslavia). *Can. J. Chem.* 36, 1410-15(1958); cf. *C.A.* 50, 16507b; Calvet, *et al., C.A.* 43, 5274h.—The rates of spontaneous pptn. of hydrated $Al_2O_3$ from unseeded and metastable Na aluminate solns. of a $Na_2O/Al_2O_3$ molar ratio from 1.15:1 to 1.00:1 were investigated. All pptn. curves showed autocatalytic characteristics with an induction period during which no pptn. occurred, a steady-state period, and a delayed pptn. period. Empirical equations are given for calcg. the max. pptn. rate and the amt. of ppt. at equil.        J. Vanderryn

Ivekovic, H.

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V Saturated ternary systems. I. Some physicochemical properties of solutions of 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane and of γ-1,2,3,4,5,6-hexachlorocyclohexane in the systems water-acetone and water-p-dioxane. H. Ivekovič (Univ. Zagreb, Yugoslavia) and B. Milićević. Croat. Chem. Acta 31, 83-90(1959)(in English).—The soly. of 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane (p,p'-isomer of DDT) (I) and of γ-1,2,3,4,5,6-hexachlorocyclohexane (lindane) in the binary systems water-acetone and water-p-dioxane and the d., viscosity, surface tension, and n of both binary and the resp. ternary systems was detd. In the region corresponding to 20-25 mole % of either acetone or p-dioxane in the satd. ternary systems a sharp change of phys. properties indicates the existence of tri- or tetrahydrates of these org. solvents. A similar change in solns. contg. 50-60 mole % of the org. solvent may be explained by assuming a disintegration of its hydrate. In the H₂O-p-dioxane-I system 2 nonintermiscible layers were observed in the region from 30 to 62 mole % of p-dioxane. The results indicate that changes in phys. properties of ternary satd. systems are functionally dependent on the same changes in corresponding binary systems. II. Equation of solubility in a mixture of two solvents. B. Milićević (Inst. zaštitu bilja, Belgrade, Yugoslavia) and H. Ivekovič. Ibid. 91-98 (1959)(in English).—An equation derived for the soly. of a substance in a mixt. of two solvents reads $dM_s/M_s = KM_s dM_s$, where $M_s$ = mole fraction of dissolved substance, $M_o$ = mole fraction of one of the mixt. components, and $K$ = const. of proportionality.                    N. Plavšić—

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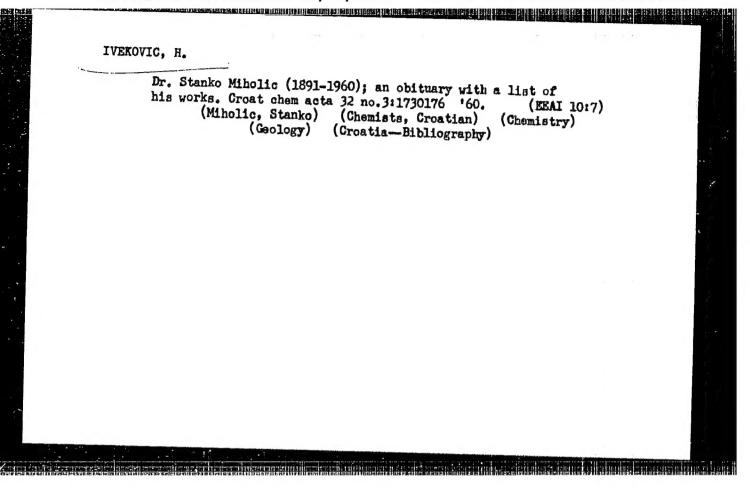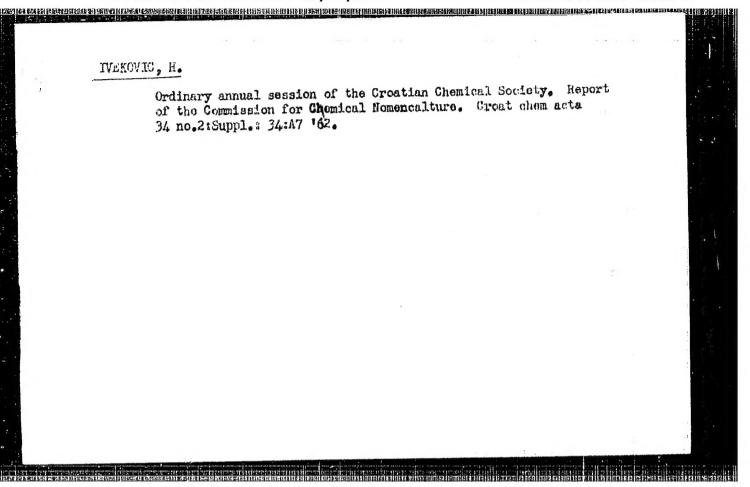
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